PAN AMERICAN fisherman

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1957

"Those poor devils are dying"

BULKY and calm, Jack Philip stood on the bridge of the U.S.S. *Texas*, watching his gunners pour fire into the Spanish men-of-war fleeing Santiago harbor.

Only a few days before, another American ship had accidentally fired at the *Texas*. Philip had responded by signalling: "Thanks, good line, but a little over."

Now enemy shells whistled over his head from vessels doomed to destruction. As the *Texas* raced past the flaming, riddled hulk of the *Vizcaya*, that Spanish battleship exploded.

Instantly, a great victorious shout sprang up. But Philip quickly silenced it: *"Don't cheer, men; those poor devils are dying."*

A bold captain who ran a happy ship, Jack Philip was already something of a friendly hero to his men. But this one sentence made him a hero of the Spanish-American War to millions of Americans.

For Americans prize gallantry. Gallantry is part of the great heritage—part of the strength—of the American people. And today, it is this strength—the strength of 165 million Americans—which stands behind one of the world's finest investments: U.S. Series E Savings Bonds.

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Study Conservation Program

SECRETARY of the Interior Fred A. Seaton has asked the recently organized United States Fish and Wildlife Service to develop a blueprint for a greatly broadened conservation program for fish and wildlife resources.

"The challenge of soundly managing our commercial fishery resources to assure a continued harvest and of meeting the growing demand for opportunities to fish and hunt at a time when those opportunities seem to be diminishing must be met head-on," the Secretary declared.

Secretary Seaton's announcement coincided with a memorandum, which he directed be distributed to all Fish and Wildlife employees, stating the broad objective of the program and calling upon the employees to contribute suggestions and proposals to further it.

The memorandum declared the Department must "make certain the Federal, State and private conservation activities effectively supplement each other in such a way that greatest progress can be achieved."

In discussing the program, the Secretary said two of the goals would be to solve problems of destructive drainage threatening marshes and wetlands for migratory waterfowl, and to initiate a planned program of land acquisition to meet Federal and State needs in wildlife management.

As a result of legislation approved by the 84th Congress, the Secretary continued, the Service now has the authority to undertake greatly expanded programs for commercial fisheries. The Service is reviewing every possibility which will benefit the fishing industry. All this material will be used in developing the new program.

Preliminary material in outline form already has been submitted to Secretary Seaton, forming the basis for expanded programs both for sport fisheries and wildlife and for commercial fisheries. This outline envisions a 10-year program. It is proposed that program planning should be accomplished in two segments—immediate, short-range goals which, in turn, will contribute to long-range objectives.

The special "task force" committee is divided into two groups representing the component bureaus of the Service. Representing the Bureau of Commercial Fisheries are these men:

Oscar E. Sette, Chief, Ocean Research, Stanford, California, chairman; Ernest Premetz, Fishery Marketing Specialist, Branch of Commercial Fisheries, Sheffield Lake, Lorain, Ohio; Harold E. Crowther, Coordinator, Saltonstall-Kennedy Programs, Branch of Commercial Fisheries, Washington, D. C.; Donald L. McKernan, Administrator, Alaska Commercial Fisheries, Juneau, Alaska; and Harvey L. Moore, Assistant Chief, Section of Marine Fisheries, Branch of Fishery Biology, Washington, D.C.

Consumers Prefer Brand Names When Buying Canned Fish

Less than half the housewives who buy canned salmon and sardines buy without asking for a particular brand. However, a majority are influenced by brand names when purchasing canned tuna.

According to a recent nationwide survey, buying by brand is practiced by 58% of the housewives who purchase canned tuna; by 41% of those who buy canned salmon and by only 35% of those shoppers who buy sardines.

In general, the practice of buying canned fish by brand name is more prevalent in the Northeast region and least in the North Central region.

These findings, which are based on a June 1956 scientific sample survey of 2,700 households distributed throughout the United States, are part of a large amount of other data obtained on household consumers' preferences for canned fish and shellfish.

Tuna Figures Up for 1956

The Southern California tuna industry racked up its biggest year in history in 1956, according to figures released recently. Sales amounted to 10 million cases, or more than three cans for every person in the United States. The California Fish Canners Association, in reporting on the year's output, said sales rose by a whopping 20% over 1955.

The report pointed up the growing acceptance of tuna by American consumers. Ten years ago, in 1946, sales totaled some four million cases. In 1956, the figures had jumped by 2½ times.

The previous all time high was 8 million 300-thousand cases recorded in 1953.

Southern California fishermen also chalked up a big year in 1956—landing 160,000 tons of tuna. This was well ahead of the 1955 catch of some 126,000 tons.

Commenting on the sharp boost in tuna sales last year, Charles R. Carry, executive director, California Fish Canners Association, stated:

"Canned tuna is becoming more and more a staple on the American table. Its nutritional value, economy and diversified uses have made it one of our most popular modern foods."

Southern California, as the center of the U.S. tuna industry, accounts for 85% of the national production.

POFI ACTIVITIES

TWO Honolulu-based research vessels of the U.S. Fish and Wildlife Service, the *John R. Manning* and the *Charles H. Gilbert*, returned December 11 from extensive investigations of albacore tuna resources between Hawaii and the Pacific coast, according to an announcement by Dr. Albert L. Tester, director of the Pacific Oceanic Fishery Investigations.

Departing Honolulu in mid-October, the two ships ran zigzag courses, fishing with gillnets and trolling lines along the way, to the West Coast, where they refueled, the *Manning* at Astoria, Oregon, and the *Gilbert* at San Francisco. The objective of the cruises was to ascertain the whereabouts and abundance of the valuable albacore tuna in the vast, unfished area outside of the coastal fishing grounds of the Mainland fishery. The Mainland fishery declines in the fall, and the route of egress of the albacore has been a mystery.

The temperature and chemical composition of the sea water were studied to get an idea of the kind of waters favored by the albacore, and 173 fish were marked with plastic tags and released in the hope that recaptures will reveal their seasonal migratory movements in and out of the fishing grounds.

According to oceanographer Gunter Seckel, in charge of scientific work aboard the *Manning*, the presence of albacore appeared to be definitely limited to a band of water running east and west with a breadth of about 200 miles, bounded on the north by surface water temperatures of 57 degrees and on the south by a mass of deep blue, barren water characteristic of the northeastern Pacific.

Both the *Manning* and the *Gilbert* had much better fishing on their surface trolling lines than on their gillnets, indicating that at this season of the year the albacore are concentrated near the surface of the ocean. This was in marked contrast to results of a previous survey to the north of Hawaii, from July to September of this year, when gill-netting was much more productive than trolling.

Richard S. Shomura, chief of the scientific field party aboard the *Gilbert*, reported surprising results from an experiment in the use as livebait of tilapia, a freshwater fish of tropical African origin which is being reared in Hawaii as a possible supplement to the local tuna bait supply. About 70 pounds of 2-inch tilapia were carried to the West Coast in the circulating sea water of the *Gilbert's* bait tank. After being subjected to water temperatures as low as 51 degrees, violent agitation in the tank during rough weather, and San Francisco Bay water so murky that the fish could not be seen in the tank, a considerable number were brought back again to Hawaii, apparently none the worse for wear and ready for another cruise.

Good opportunities were not found on the trip to test the effectiveness of this bait fish in attracting albacore to the boat, but little doubt remains as to their hardiness, and since albacore were taken on troll lines that had consumed tilapia we presume the albacore found them palatable.

Three Interesting Publications

The laboratory issued three publications during November. An analysis of tuna studies in the Line Islands area highlights the first American commercial attempts to longline for yellowfin tuna near the Equator. The attempts in the spring of 1954 by the vessels *North American* and *Alrita* were exceedingly promising. Subsequent attempts by Hawaii-based craft were generally uneconomical, first because tuna became less abundant following a change in the environment, second because the vessels were beset with gear problems, and finally because the price for tuna suffered a worldwide decline. Analysis of this material and subsequent records show that it may be possible to forecast fishing success in that area. At the present, environmental conditions are more favorable and it appears that tuna are more abundant.

The first comprehensive study of the food of bigeye tuna was also issued. This study shows that both bigeye and yellowfin share the same diet, consuming about 62% fish, 30% squid, and 8% miscellaneous mollusks and crustacea. The food study did not suggest reasons for the different distributions of the two species.

The third publication is a collection of six translations of Japanese technical papers on the size composition of Pacific albacore. The size of albacore differs widely through the Pacific; generally smaller fish are found in the temperate zone and larger fish in the tropics. Ripe albacore have not been taken in temperate waters, but they have been taken in the tropics. These tests suggest that our temperate zone fisheries are catching immature albacore during feeding migrations, and that the origin of the albacore stocks is in the tropics. *

Canada Asks UN for 12-Mile Fisheries Zone

Canada and the United States are parties to seven international fishery treaties. Joint administration of these treaties, particularly those for halibut and sockeye salmon, has established a world pattern for successful administration among nations. Our two countries have worked hand in hand to promote a solution of international fishing problems and we have pointed with pride to the success of our work at numerous international fisheries conferences.

Hence the U.S. fishing industry was surprised by the action of Canada in taking the lead at the UN for a fixed 12-mile fishery limit, with exclusive jurisdiction within that belt for coastal states. As a matter of fact, this action on the part of Canada has induced suggestions on the part of American fishermen to begin to think in terms of retaliation and ot look to the complete re-evaluation of all existing bases of understanding between the fishermen of the two countries.

Some Canadian industry leaders take a dim view of Canada's proposal before Committee Six of the UN and have expressed concern lest the 12-mile rule eventually be adopted and thereby exclude Canadian fishermen from operating within 12 miles of our Alaskan Coast or the Aleutian Islands. The U.S. fishing industry hopes that the Canadian Government will reconsider her 12-mile proposal.

Circulars on Fish Hatcheries

A circular, *This Is a Pondfish Hatchery*, just issued by the Fish and Wildlife Service, completes the series of three small publications on fish hatcheries, according to Director John L. Farley. The other two circulars are entitled *This Is a Salmon Hatchery* and *This Is a Trout Hatchery*.

The purpose of the circulars is to portray in a quick, easy-to-read manner the function, operation and physical features of each of the three types of hatchery. Each circular is illustrated with photographs of a typical hatchery and with artist's drawings which portray the life cycle of various fish and some of their physical characteristics.

The circulars show that the pondfish hatchery is a group of rearing ponds, each about an acre in extent, while trout and salmon hatcheries have batteries of concrete raceways or rearing ponds each about 8 feet by 80 feet in area. A feature of some salmon hatcheries is the fish ladder from the stream to spawning and holding ponds in addition to the concrete raceways. Each leaflet explains the cultural methods used for the species and the manner in which the hatchery product helps solve the particular fishery problem.

The pondfish produced are mostly largemouth bass and blue gills and to a lesser extent other warm-water fish like smallmouth bass, redear sunfish, northern pike, walleye, and channel catfish.

Rainbow, brown, cutthroat and brook trout provide much of the sport fishing in the United States and account for most of the production from the trout hatcheries.

There are five species of salmon native to the Pacific area, the king (chinook, spring); red (sockeye, blueback); silver (coho); chum (dog) and pink (humpback). All species except pink salmon are reared in Federal hatcheries in the Northwest.

The circulars are available at the 90 hatcheries maintained by the Fish and Wildlife Service, or they may be obtained from the Superintendent of Documents, United States Government Printing Office, Washington 25, D. C., at a price of 5 cents each.

Good Mackerel Catch

SOUTHERN California fishermen have been bringing in a bumper haul of mackerel. The 1956 catch will run to about double the 27,000 tons landed last year, according to Charles R. Carry, executive director of the California Fish Canners Association. Likewise, canning figures are substantially ahead of the 593,000 cases packed in 1955.

The heavy mackerel catch—largest since 1952—comes at a time when there is a world shortage of sardines, including a limited catch in the waters off Southern California. These absences—which occur from time to time—are attributed to currents and other oceanographic conditions.

Fishermen have been devoting more efforts to mackerel in view of the sardine scarcity. Sales of canned mackerel have shown a marked increase.

Commenting on the big mackerel harvest, Carry declared:

"The abundant catch means a plentiful supply of high protein, economical mackerel for American consumers. This canned fish is one of our best food buys today."

Southern California accounts for the major portion of the U.S. mackerel catch. There are two varieties—Pacific mackerel and "jack" mackerel, both available in one pound cans.

Spain Building Four Tuna Fishing Vessels

The Spaniards are building four large clipper-type tuna-fishing vessels, according to newspaper reports. The vessels were ordered built by an important Spanish ship chandler to be used in the tuna fishery off the Canary and Azores Islands. It is expected that the tuna caught by these vessels will be frozen and shipped to Italian canneries.

Assistant Secretary for Fish and Wildlife

The President on January 1 appointed Ross L. Leffler, assistant to the executive vice president for operations of United States Steel Corp., to be the first Assistant Secretary of the Interior for Fish and Wildlife. Mr. Leffler has been very active in fish and game as well as civic affairs in his home State of Pennsylvania and the City of Pittsburgh.

U.S. Coast and Geodetic Survey

Nation's First Technical Bureau Sounds Sea Depths, Shoots Stars to Measure Earth's Axis Spin, Hunts Submerged War Wrecks, Predicts Daily Tides, Distributes 43 Million Air Charts. Sesquicentennial Exercises to Spread Over Coming Year.

SECRETARY of Commerce Sinclair Weeks has announced that the U.S. Coast and Geodetic Survey, Commerce Department, plans a series of public events in 1957 to celebrate its 150th anniversary.

The Survey was established on February 10, 1807, in the administration of President Thomas Jefferson, the first technical bureau of the Federal government. It has grown in scope, technical proficiency, and public service so that today it conducts the official basic surveys of the land areas and coastal waters of the United States and possessions.

Millions of people use its findings in everyday life, including tide tables for bathers, aeronautical charts for flyers, nautical charts for mariners, starting points for surveyors, and studies in magnetism, seismology and other scientific fields.

The sesquicentennial program will be under the direction of Admiral H. Arnold Karo, Director of the Coast and Geodetic Survey. It will be observed in various ways in numerous regions during the year. There are plans for the issuance of a special postage stamp, sesquicentennial dinners in Washington and elsewhere, open house at headquarters, field offices and aboard ships, meetings of various scientific and professional societies, special publications and demonstrations of the many ways in which the historic agency is performing modern services essential to public safety, commerce, defense and science.

Where On Earth We Are

It is clear enough that the "Coast" part of the Survey's name labels its hydrographic measuring activities that result in nautical charts for use by the Navy and Coast Guard, commercial shipping and private yachting.

But the "Geodetic" part of the name puzzles many. Goedesy is the kind of surveying that takes into consideration the size and shape of the

earth, and checks its calculations by the fixed stars. The local surveyor, who deals in straight lines, has to have a point to start from. These points, called "plane coordinates," are fixed by the Coast and Geodetic Survey. Every citizen's back fence depends for its accurate location on the bureau's work.

An elaborate network of triangular lines has been thrown across the country from coast to coast in the last 150 years. Vast as it is, it all depends on observations of the human eye. At distances of from two to 100 miles or more, Survey men have signaled one another painstakingly from hills, mountains and portable towers as they moved across the continent.

At sea the Survey charts the depths with delicate electronic sounding instruments that have replaced the ancient lead. But nothing has proved more efficient at finding submerged peaks and sunken wrecks than the wire drag, a submerged steel wire that two vessels pull across a channel. Off Alaska, Survey men discovered a pinnacle rock rising 650 feet from the ocean floor to within six yards of the surface. They named it the Washington Monument.

From Savages to Earth Satellite

The Coast and Geodetic Survey is the source of coastal and aeronautical charts for the United States and possessions, and of information on tides, currents, earthquakes and the earth's magnetism.

Besides mapping the coasts, the bureau has made a network of basic surveys showing latitude, longitude and heights above sea level for the whole Continental United States and its possessions. It has erected more than 500,000 markers.

Surveys of the coasts must be kept up to date, as erosion and the deposit of silt make continued changes. In the next few years the bureau must also supplement its geodetic (land) surveys for use in the new 41,000-mile Federal-Interstate Highway program.

The Survey's magnetic studies are important not only to mariners and aviators in the use of their compasses, but to civilian and military radio. The survey supplies the defense services with information (on the curvature of the earth and magnetic conditions) that is vital to guided missile development.

The agency has an important role in magnetic observations for the International Geophysical Year (1957-58). Its work will help facilitate the launching of the first earth satellite.

In the next few years the bureau will extend its charting of Georges Banks and other areas on the continental shelf. The United States has claimed this underwater domain of 2,000,000 square miles, including the resources beneath its floor.

The Survey maintains a seismic (earthquake) sea wave warning system in the Pacific. It also studies earthquakes on this continent in order to advise builders how to prepare resistance against the shocks. The agency keeps 50 seismographs along the San Andreas fault in California alone.

Stars and Markers

The Coast and Geodetic Survey shoots the stars to check the movement of the earth on its axis . . . sends warnings across the ocean when a sea (earthquake) wave is coming . . . answers with polite regret letters from small boys who ask for charts of sunken treasure . . . fixes the measurements that are basic to international boundaries and your neighbor's hedge . . . takes soundings among the ice floes off Alaska's northern coast during the short Arctic summer . . . battles Autumn hurricanes in the Gulf Stream . . . in its surveys, allows no error greater than the thickness of a paper match for a distance of 10 miles . . . proved that Admiral Robert Peary's claim of having reached the North Pole was valid.

The Survey was founded to chart the bays and harbors of the young Republic and protect the sailing ships on which the nation's trade depended. At first it mapped only the shorelines, to help mariners recognize landmarks. Later it was sent inland, and has now drawn in from coast to coast the imaginary lines on which the determination of all American boundaries is based.

The round bronze markers of the Coast and Geodetic Survey are familiar to mountain climbers from the White Mountains to the Sierra Nevada, and dot the desert areas of the Great Basin. The Survey has installed nearly 400,000 bench marks for distances above sea level, and more than 150,000 "triangulation stations" for which exact longitude and latitude have been calculated.

The Survey helps avert not only shipwrecks but air crashes. Since 1926 it has supplied the country's aeronautical charts, which show airlanes, beacons, airports and the obstructions that bother pilots on landing and take-off. More than 43 million copies of its aeronautical charts were issued in the fiscal year 1956, besides 750,000 nautical charts.

Since 1952, in addition to improving its charts and maps, the Survey has completed a survey of the strategic Arctic Coast of Alaska; has intensified its charting work in the Bering Sea and its search for sunken wrecks along the Atlantic Coast; and has broadened its contributions to science.

The 150th Anniversary of the signing of the act that created the original Survey will fall on Sunday, February 10, 1957. *

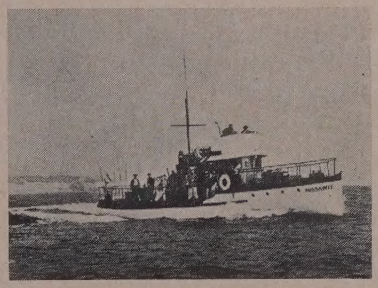
New Fish Screen

A $2,000,000 fish screen, expected to save at least 50,000,000 baby striped bass, salmon and other fish annually, has been completed in the Sacramento-San Joaquin River Delta of California.

The structure, largest of its kind in the world, is located in the channel leading to the U.S. Bureau of Reclamation's Tracy Pumping Plant, at the head of the Delta-Mendota Canal. It really isn't a "screen" at all but a series of louvers and bypasses officially designated as a "Fish Salvage Facility."

This facility employs a unique fish diversion principle. It was specially designed to meet the problems posed by this gargantuan Central Valleys project diversion. At top capacity, a flow of 4,600 cubic feet per second —equal to half the normal flow of the Sacramento River — will be sucked through the structure and delivered to agricultural lands in the western San Joaquin Valley.

Without this facility the tremendous flow would carry with it millions of newly spawned striped bass, for a major part of the striped bass spawning grounds is within the influence of the Tracy plant's great suction pumps. Millions of young salmon on their downstream migration to the ocean would also be carried to the irrigation ditches and furrows of San Joaquin Valley farms. Shad, black bass, catfish, sturgeon and other species also would be destroyed.



Government Allocates Funds

Progress which the Fish and Wildlife Service has made with Saltonstall-Kennedy Act funds in the fields of research, exploration, technology, marketing and education on behalf of the fishing industry and the consumer is detailed in a report to Congress released by Secretary of the Interior Fred A. Seaton. Funds for 1957 will be allocated in the near future in light of the advice of the American Fisheries Advisory Committee which met in Chicago during October.

The report divides the Saltonstall-Kennedy work into two categories—Fishery Biological Research for which $1,385,000 was allocated for fiscal year 1956 and $1,376,500 for fiscal year 1957; and Commercial Fishery Studies, with $1,426,000 allocated in fiscal year 1956 and $1,418,500 available for fiscal 1957.

Research on Alaska salmon, the Pacific sardine, the North Atlantic trawl fishes, herring, Gulf of Mexico fishes, striped bass, menhaden and a phase of the ocean research program took $1,041,000 in the past fiscal year; $1,063,700 is allocated to the same group of projects for the current year. The money for oyster research in the Gulf, mid-Atlantic and New England areas is the same for each year, $75,000, with each fishery getting $25,000. The big Pacific Oceanic studies which are based at Hawaii and which are to define the location of albacore tuna stocks in the waters north of Hawaii had $234,000 in 1956 and will have $227,000 in 1957.

The Commercial Fishery Studies include exploratory fishing and gear research, fishery technological studies, commercial fishery statistics, commercial fishery economic studies and fishery education and market development.

First Fishery Fund Loans Approved

The first five loans to be granted from the new fisheries loan fund have been approved by the U.S. Fish and Wildlife Service.

One of these loans is to an applicant in Massachusetts, two are to California applicants and two to Alaska fishermen. The loans will be "official" when the applicants sign the terms set forth in the loan agreement. The loans will be closed and serviced for the Department of the Interior by the Small Business Administration.

The total of the five loans is $41,500. About 70 other applications are on file and being handled as rapidly as possible, totaling $2,300,000.

The fisheries loan fund was established by the Fish and Wildlife Act of 1956, "to make loans for financing and refinancing of operations, maintenance, replacement or repair of fishing gear and vessels, and for research into the basic problems of fisheries." Applications for shore installations or needs other than those set forth above are not eligible.

The loan applications are well distributed over the country. From New England have come applications for $919,500; from the West Coast there are requests for $960,000. Gulf fishermen are seeking $274,000; those of the Middle and South Atlantic $48,000; Alaskans are requesting $72,500 and Great Lakes fishermen are asking $40,300.

The broad objective of the fisheries loan fund is to provide financial assistance which will aid the commercial fishing industry to bring about a general upgrading of the condition of both vessels and fishing gear in order to produce more efficient and profitable fishing operations.

The initial $10 million provided by the 1956 act is a revolving fund. The rate of interest on all loans granted is at present fixed at 5% per annum. The period of maturity of any loan shall be determined and fixed according to circumstances but in no case can it exceed a period of 10 years.

RECORD FISH CATCH IN 1956

American fishermen took more than five billion pounds of fish from the seas in 1956 and set an all-time national record, according to preliminary reports by the U.S. Fish and Wildlife Service.

In 1955 the total American catch was 4,600,000,000 pounds; in 1941 it was 4,900,000,000 pounds which is the present record year.

Menhaden, a fish used primarily for oil and meal and usually comprising about 40% of the catch, is setting the pace with an increase of 200 million pounds. Other species which have been taken in considerably greater volume than in 1955 are: tuna, up 60 million pounds; Alaska salmon, up 50 million; Alaska herring, up 39 million; California sardine, up 28 million; Maine sardine, up 26 million; Pacific jack mackerel, up 23 million; Pacific mackerel, up 9 million; ocean perch, up 6 million; haddock, up 10 million, halibut, up 7 million.

Effects of Power Dams on Oregon Fishing

Department of Fisheries researchers will be working in Oregon next spring on a continuation of investigations into the effects of power dams on the survival of downstream salmon migrants.

A $58,000 contract for the work, to be done at the Big Cliff dam on the north fork of the Santiam River, near Salem, has been awarded the department by the U.S. Army Corps of Engineers. Similar studies were conducted at McNary dam on the Columbia River in 1955 and 1956, and at dams on the Baker, Elwha, Lewis, Chelan, White and White Salmon rivers in Washington.

Data on mortality rates of downstream salmon migrants are of utmost importance in helping to maintain the important salmon runs in the Columbia.

The 1955 and 1956 McNary experiments utilized 1,860,000 marked fall chinook salmon fingerlings. The studies at Big Cliff will use both sockeye and silver yearlings and fingerlings.

The Big Cliff dam was selected because of its favorable construction and conditions. The projected experiment will allow a recovery of more than 10% of the fish released, whereas at McNary the recovery ratio was less than 1%. Gear will also be fished to determine horizontal distribution of fish.

Results of the Elwha River studies indicated the same survival rates may apply to both chinook fingerlings and silver yearlings. If such agreement can be shown between fish of different species and size at Big Cliff dam, then even though survival rates between the dams may be different, it could be assumed that the survival rates for the larger fish at McNary dam is the same as for chinook fingerlings.

How Fish Flavor Is Improved

Monosodium glutamate, the flavor intensifier which once was the highly-prized "secret ingredient" of famous chefs and gourmets, is now in widespread use by the nation's leading food processors, according to E. H. Hungerford, chairman of the Glutamate Manufacturers' Technical Committee.

Bulk sales to processors, for perking up the flavor of their food products, reached a new high of 10,670,000 pounds in 1956, or a 66% increase achieved during the past five years. Glutamate is said to add a new "taste dimension" to many processed foods, including canned tuna.

The general rule is that all protein foods, vegetable or meat, gain in flavor when glutamate is added; and flavor improvement can be even greater in processed foods if glutamate is introduced at the time of processing.

By adding glutamate at the time of processing, the flavor is literally "cooked in." The glutamate originally provided by nature and lost in processing is replaced. To extend such knowledge Glutamate Manufacturers' Technical Committee recently inaugurated an information service, with headquarters at 214 Front St., San Francisco 11, Calif.

Territorial Waters and Fishery Jurisdiction

General debate on the report of the International Law Commission on the "Final Report on the Regime of the High Seas, the Regime of the Territorial Sea, and Related Problems" was held last month by the sixth committee of the United Nations.

The positions voiced generally followed the position taken by each country in recent years. The countries favoring a 200-mile jurisdiction, such as Chile, Ecuador, and Peru, receded somewhat from their former extreme positions to the extent of stating that if conservation problems connected with fishing off their coasts are accommodated, their interest in extended sovereignty would diminish.

Most countries seem to favor adoption of the United States proposal to endorse the recommendation of the ILC that its report on the law of the sea be referred to a special international conference for study and later action.

The significance attached to these UN proceedings by the U.S. fishing industry is indicated by the attendance there of a number of representatives of the industry, to observe the sessions. Fishing industry representatives who have been present at UN headquarters for various sessions this week include: W. C. Arnold, Alaska Salmon Industry, Inc.; Milton E. Brooding, International North Pacific Fisheries Commission; Dr. W. M. Chapman, American Tuna Boat Association; Charles R. Carry, California Fish Canners Association; Charles Jackson, National Fisheries Institute; Harold Lokken, Fishing Vessel Owners Association, Inc.; Thomas D. Rice, Massachusetts Fisheries Association, Inc.; Harry Sahlman, shrimp fleet operator from Florida; Mary Shulman, National Shrimp Congress; George E. Steele, Jr., National Canners Association; and Fred Zimmerman and Wayne Heydecker of the Atlantic States Marine Fisheries Commission.

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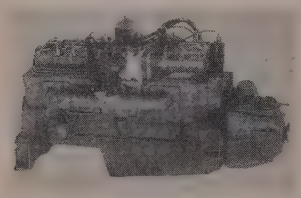


"Flagship" Marine Engine

Above is shown the 6-cylinder, 136 horsepower Flagship Marine Engine. The manufacturer says that hydraulic shifting makes this engine ideal for large cruisers.

This 320 cubic inch model developing 136 horsepower at 3,000 r.p.m., and a full 149 horsepower at 3,400 r.p.m. The 4 inch bore and 4½ inch stroke of this model is coupled with a seven bearing crankshaft giving maximum smoothness of operation. Overall length is 46 inches with a maximum width of 24¾ inches, a 20 inch height above the crankshaft, and a depth below the crankshaft of 12 inches. Flagship Marine Engine Co., Baltimore 22, Maryland.

Cabin Cruisers

Two-tone color combinations and an exclusive fiberglas process highlight the 1957 "Rainbow Fleet" of Plycraft outboard cabin cruisers.

The exclusive fiberglas process used in constructing the boats assures the owner an oak-framed plywood craft that never needs caulking, is leakproof, rot-proof and teredo proof. The hulls, decks and cabin tops of all Plycraft boats are completely and permanently covered with fiberglas. Write to Plycraft, Inc., Lawrence, Mass.

Synthetic Net Fibers

Successful experiments have been conducted with a new low-cost synthetic fiber of the poly-vinyl-alcohol group to replace cotton in the manufacture of gill nets used to catch herring in the West German lugger fisheries.

The Fisheries Research Institute in Hamburg is investigating the suitability of polyvinyl-alcohol fiber (this type of synthetic fiber is reported to be produced on a large scale in Japan where it is marketed under various trade names). It was found that this fiber when submerged in water loses about 30% of the very high tensile strength it has when in the dry state. The Institute by experimentation has managed to eliminate this disadvantage by coating the fiber with a special type of iron-black that is also used to strengthen perlon nets.

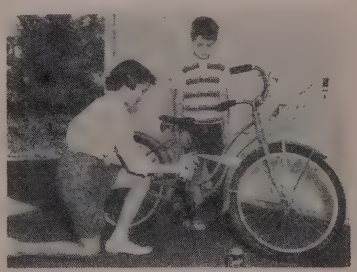
This achievement may prove to be important since this rot-resistant fiber is reported to cost less than other types of synthetic fiber.

Gill Net Float

A new gill net float, 1¾ inches in diameter and five inches long with center hole, said by the manufacturer to be the lowest priced float of this size and buoyancy available in the United States and Canada, is being announced.

Designated as No. 200, results from the Detroit Testing Laboratories disclose that it withstood pressures in excess of 150 fathoms of water. Like other Dale floats, it is unconditionally guaranteed.

A free sample may be obtained by writing Dale Plastics Corporation, 5736 Twelfth St., Detroit 8, Mich.



Self-Spraying Paint

Crystal-clear Flamboyant colors and deep-tone colors are now available in self-spraying aerosol cans for refinishing and touch-up jobs.

Push-button refinishing of bicycles, boats, outdoor equipment, and other uses is made possible with this handy "shake 'n spray" aerosol dispenser. Many popular colors. For additional information write Sprayon Products, Inc., 2075 East 65th St., Cleveland 3, Ohio.

Powered by Universal

This 22 foot Cruiser with 7 foot beam and V-bottom construction has proven an ideal craft for water sports and deep water fishing in the waters near Nassau in the Bahama Islands. It is powered with a "Universal" Cruiser Six engine of 90 H.P. which gives plenty of speed.

The boat was named "Carmelena," and the engine was made by Universal Motor Company, Oshkosh, Wis.

New Hitch Fits Over 180 Cars

This universal boat and utility trailer hitch fits over 180 cars and station wagons from 1949 to 1957 models. It is easily assembled and can be installed in 15 minutes.

This versatile unit is of all steel construction and consists of only six parts. No holes need be drilled. The load is *not carried by the car bumper* since the hitch cross members are fastened directly to the car frame. The manufacturer claims it will safely pull boat, utility, and camp trailers up to 3,000 pounds. Atwood Vacuum Machine Company, 1400 Eddy Ave., Rockford, Illinois.

* * *

Hunters and fishermen, according to the National Automobile Club, spent nearly 87 million dollars for all types of hunting and fishing licenses, permits, tags, trout stamps, and Federal duck stamps during the last fiscal year.

Schoettler Resigns

Robert J. Schoettler, director of Washington State fisheries since October, 1950, submitted his resignation to Governor Arthur B. Langlie effective January 16, 1957.

He also has sent a letter to President Eisenhower resigning from the International Pacific Salmon Fisheries Commission, which he currently heads as chairman. Members of the commission are appointed by the President. He has been a commissioner and twice chairman since 1950.

Private Fish Ponds

A one-acre fish pond—well-managed, properly fertilized, adequately fished—will yield an annual harvest averaging 200 pounds of fish each year and provide 400 hours of good fishing, says the Fish and Wildlife Service. In the United States, there are more than a million and a half farm ponds of varying sizes but averaging an acre apiece; 100,000 more ponds are being made each year through soil conservation and water storage projects.

In 24 States, laws and policies prohibit stocking of farm ponds with fish produced in the State hatcheries. The Fish and Wildlife Service has been called upon to fill that gap and each year provides more than 30,000,000 fish, mainly warm water species, for approximately 28,000 noncommercial ponds in 42 States.

The fact that the Federal Government and many States furnish the appropriate kind and number of fish for stocking, plus the knowledge that information on the development and management of ponds is readily available, has greatly stimulated the pond construction program.

Interest in farm ponds is steadily increasing. The idea, which "took hold" first in the southeastern States where almost half the ponds are located, has spread to other sections of the country where topography and climate make these small fishing areas practical. They have a direct value in providing family fishing at the same time they relieve fishing pressure on natural fishing areas.

Ponds smaller than a half acre rarely furnish good fishing, but ponds of from one to three acres are ideal for the average family and friends. Larger fishing ponds require more management, effort and expense.

FWS Study Fish to Aid Dietary Problems

In a move to keep pace with the growing demands for diets which are both nutritive and appetizing, and to assure fish its rightful place in them, the Fish and Wildlife Service of the Department of the Interior has inaugurated a continuous study of the protein, fat, mineral and vitamin content of all species of fish used for food.

There are about 160 species of fish and shellfish used on American tables and the nutritive elements vary with the subspecies, the season and area of capture, sex and various other conditions. While such technological studies have been made from time to time on a few species, the knowledge of the changing nutritive values of even the most-studied varieties is insufficient to meet modern demands.

Information secured through this study will help guide dietitians, home economists and others concerned with the health of the American people.

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GOOD PROSPECTS

Trout and Salmon Fishing

The Eel River is most famous as a steelhead trout stream, but provides a great deal of good salmon fishing as well. A large area of tidewater at the mouth is suitable for trolling. Upstream as far as the mouth of the South Fork the stream flows through a narrow valley and is readily accessible for its entire length.

Going south, according to the National Automobile Club, Highway 101 swings away from the main Eel and parallels the South Fork for over 50 miles. Most of this portion of the South Fork flows through a rather wide-bottomed canyon populated by many magnificent groves of redwood trees. Most of the stream is readily accessible in any weather and provides a great deal of good salmon and steelhead fishing.

Above the mouth of the South Fork, the main Eel flows through a canyon and is touched by roads only at intervals. Most of these roads become impassable after the first heavy rains. Most sea-run fish usually wait until after the first rains before going this far upstream.

The Middle Fork of the Eel joins the main river at Dos Rios. Parts of it are accessible by road. It is best known as a summer steelhead stream.

Near the mouth there is good salmon trolling for kings through September and October. This fishery is largely confined to tidewater. Kings are caught farther upstream during the fall and winter. The time of this upstream movement depends to some extent on water flows. Fishing for silver salmon starts in November.

There is good fishing for half-pounders (small steelhead) in late summer and early fall from the mouth of the Eel upstream to the mouth of the Van Duzen River in the vicinity of Bridgeville.

In the winter the Eel and its South Fork provide excellent fishing for large steelhead.

Preparations for Canning Tuna . . . 100 Tons Every Minute

Australia reports a new machine, the first of its kind released from the United States, will make possible treatment of South Australian tuna for canning at the rate of 100 tons a minute. The machine has been installed at the factory of the South Australian Fishermen's Co-operative in Adelaide.

R. M. Fowler, general manager of the Co-operative, sees possibilities of marketing South Australian-caught tuna in England. At present, England imports most of her tuna requirements from South America, he said. With the new machine, leased from the American patentee, it is believed possible that prices will be at a competitive level. The South Australian cannery, which has been operating for only three months, is large by Australian standards. It has been processing deep-sea salmon for local requirements.

RUSSIAN FISHING EXPANDS

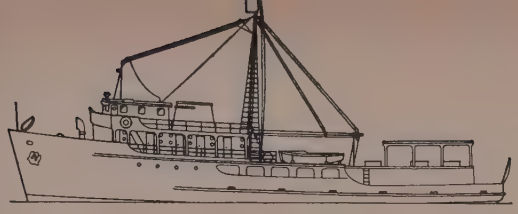
The Russian fleet of large ocean trawlers or factoryships will be increased to 50 during the sixth five-year plan running from 1956 to 1960, according to Norwegian journalists who recently visited Russia and talked with Russian Fishery Minister Isjkov. The trawlers are equipped with freezing and filleting machinery and use a stern slipway for hauling the trawls. The first group of 14 trawlers have a cargo capacity of 600 metric tons each, carry 100 men, have 1,900-horsepower engines, and fish for both cod and herring.

Since the trawlers are too large to go through the White Sea Canal, they must go back and forth along the Norwegian Coast between Tallin and Leningrad in the Baltic Sea and Murmansk and Archangel in the North.

The Russian herring fleet off the Norwegian coast was reported to number 300 units. Fifty vessels have conducted extensive herring research and now know exactly the herring migrations from Norway to the Baltic Sea and Murmansk.

The Northern Sea route is now kept open three to four months each year, but the goal of the sixth five-year plan is to increase this to five or six months. This will be accomplished with the regular icebreakers. An icebreaker with atomic engines will be tested during the five-year plan but cannot be set into operation until after 1960. The longer navigating season will be of considerable importance to the Soviet fisheries since it will then be possible to shift the new trawler fleet back and forth between the North Atlantic and the North Pacific to areas where the fishing potential is the greatest.

Forty years ago there was no Russian ocean fishery off the Murmansk coast in the Barents Sea. Today Murmansk is one of the world's largest fish harbors and a base for 500 modern fishing vessels, according to a report in a Danish fishery periodical. Most of the vessels are large trawlers, but about 50 fish for herring with gill nets. There are large repair yards for the fishing fleet. Last year Murmansk received 640,000 metric tons of fish—which reveals how much the Soviet Union has expanded its ocean fisheries in less than two-score years.



Atomic Energy for Fishing Boats

Among future developments is envisioned an "atomic fishing boat" that would use the atom's energy to lure, capture, sterilize, and refrigerate or can the fish. According to a University of Wisconsin scientist, Dr. Arthur D. Hasler, the atomic "luring" would be done this way:

The ship's atomic reactor, in addition to propelling the ship, would furnish enough current to electrify the water in the area near the vessel —and thereby attract the fish to a point where they could be pumped aboard.

Such features also would be valuable for ships "that have to go long distances into the tropical seas to harvest the crop of fishes, such as tuna. When ships are at sea for long periods in warm climates some fish spoil."

Dr. Hasler added, "I visualize the possibility of being able to build an atomic ship, something on the order of the (atomic submarine) Nautilus, with an abundant supply of energy available for the canning and refrigeration processes that could be taking place on the ship as soon as the smaller fleet ships which supply such a mother ship landed their catch of fish."

He invisioned atomic-powered "refrigeration rooms" to keep fish refrigerated "for many weeks" until the vessel had a full load. Perhaps spoilage could be entirely eliminated by sterilizing the fish, by an atomic radiation process.

Such ships might also be equipped with sufficient power to generate enough electricity for attracting fish to a concentrated area.

Requa Heads Fish Canners Association

Harold P. Requa, Jr., Westgate-California Tuna Packing Co., San Diego, has been elected president of the California Fish Canners Association. Requa was named to succeed William C. Morehead, Pan-Pacific Fisheries, Inc., Terminal Island.

Other officers chosen to serve for 1957 were Joseph M. Mardesich, Franco-Italian Packing Co., vice president; and Gilbert C. Van Camp, Jr., Van Camp Sea Food Co., Inc., secretary-treasurer.

The 1957 officers were elected recently at the California Fish Canners Association annual meeting at the Ojai Valley Inn, Ojai, California.

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How do slums start? Usually just one house starts to slide downhill and soon a whole block changes. Pride is lost. Other houses are neglected, decay spreads.

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What's your stake in stopping slums?

If you think your town is different, just look around you . . . If you think slums only affect persons who live in them, think again.

Slums raise taxes and lower property values of the whole town. They raise rates of crime, delinquency and disease. *Everyone* has a real stake in stopping slums. And *that includes you as a businessman.*

Your firm is certainly dependent on the welfare of the community where you do business. But it's more than good business—it's good citizenship to take part in efforts aimed at civic improvements. It's the *responsibility* of every business.

What can your firm do? The answer to America's housing problems starts with individuals. But to roll back slums is such a big job it's going to take more than individual effort. It will need the cooperation of your business and many others.

Some slums should be torn down and a fresh start made. Others can be remodeled and made to conform to better living standards. So it is up to you to support every sound program which seeks adequate housing for all our people.

New help is now available

There is a new national, non-profit organization called A.C.T.I.O.N.—The American Council To Improve Our Neighborhoods—which is designed to help all individuals or groups interested in putting America's house in order.

Send for a free copy of "ACTION." It explains what A.C.T.I.O.N. is and proposes to do. It lists booklets, research, check-lists, and other material which can help you. Address P. O. Box 500, Radio City Station, New York 20, N. Y.

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"Lost Cabin" Gold Story

In the early days of gold around California, men mad with the fortune fever lent an easy ear to any rumor or legend about the yellow metal and surged by the thousands into any area where rumor or legend said that they might "strike it rich." Many an early prospector, according to the National Automobile Club, made his way into Northwestern California and Southern Oregon for no other reason than that he had heard the "Lost Cabin" story and believed that it might be true.

In the early days of mining, so story went, one prospector crossed the Coast Range and made his way through the primeval forests to the lonely valleys that led down to the sea. In one of these valleys he really "struck it rich," then built himself a cabin and set about gathering in the gold.

After some months of digging he had built himself up an enormous fortune, but he had also attracted the attention of local Indians. Peeved at his presence in their wilderness, they attacked him at his cabin one day, knocked him senseless and left him for dead, were unable to find the gold he had mined, then burned his cabin to the ground.

When they had left, he recovered consciousness, but had lost his reason from the bludgeoning. Somehow he found his way back to civilization where friends guided him back to his family in the East. He lived there for a short time and then died, but just before he died he regained his reason long enough to tell of how he had "struck it rich" and hidden great quantities of gold near his cabin. With his dying breaths he managed to describe in detail the place in which the cabin had been built, and all who heard were sure that it must have been in some coastal valley of Northern California or Southern Oregon.

That's the strange story that was told and spread and brought so many miners with their picks and their pans to the Northern California area in the days of gold.

Recreation Is Big, Growing Business in U.S.

Recreation is a 40-million-dollar a year business and it's growing every year, according to statistics compiled by Garret Eppley, chairman of the Department of Recreation, Indiana University.

He predicts that the three-day week end will be common by 1970 and will give recreation a tremendous boost. For example in 1950 some 27 million persons visited the national forests. Last year the figure jumped to 45 million persons. Other outdoor sports and recreational activities are showing similar increases.

However, the West's national parks and forests did not and can not show such growth. Hence unless recreational facilities are constantly improved they may become "slums." Canada could become the nation's playground if we fail to maintain our progress outdoors.

There is need for more experienced park and recreation workers and a stepped-up program to pry the nation's children away from television which supposedly takes 18 hours a week of a child's time.

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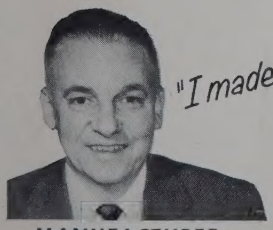

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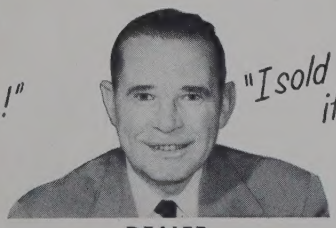

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MOST fishery interests agree that things are looking up for the future. Some of our most troublesome problems are being recognized and helpful solutions searched out—by both business and government authorities. You can read about them on other pages in this magazine.

With the American economy in general on a high level, and most lines of business apparently destined to remain that way, we believe that the fisheries situation also will shape up quite satisfactorily in the days ahead.

Our efforts now and always are dedicated to the creation of bigger and better markets for canned tuna, and to advance the best interests of the entire tuna industry.

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